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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/777,946	02/06/2001	Hideo Kawahara	1232-4680	3252

27123 7590 02/10/2006

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EXAMINER

VIEAUX, GARY

ART UNIT PAPER NUMBER

2612

DATE MAILED: 02/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/777,946

Applicant(s)

KAWAHARA, HIDEO

Examiner

Gary C. Vieaux

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 10, 12, 19, 21, 22 and 27-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 10, 12, 19, 21, 22 and 27-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Amendment

In response to the Office Action dated November 14, 2005, claims 1, 12, 21, and
5 22 have been amended. Claims 11, 20, and 31-38 have been cancelled.

Response to Arguments

Applicant's arguments filed on November 14, 2005, have been fully considered
but they are not persuasive.

10 Regarding claims 1, 12, 21 and 22, Applicant submits that the amended claims
are not obvious over Steinberg in view of Boyack (Response, p.7.) The Examiner
respectfully disagrees.

Amended claim 1, as representative amended claim language, provides for an
apparatus comprising:

15 (A) a photometric unit for receiving object light and converting the object light into
luminance signals of a plurality of areas;

(B) a control unit for calculating a histogram of a luminance distribution on the
basis of the luminance signals of the plurality of areas converted by said photometric
unit, and

20 (C) a luminance level deciding unit for deciding a area which is regarded as
having a predetermined luminance level in the histogram,

wherein said control unit controls a light emission of an illumination device so as to be not affected by an area which is decided as to have the predetermined luminance level by said luminance level deciding unit and in which the distribution of the histogram exceeds a reference point (Response, p. 2-3.)

5 Setting aside any additional rejections created by amendment, and with the Examiner interpreting the language of the amendments as best possible (see the §112 rejections supra), the Steinberg reference discloses an apparatus comprising (A) a photometric unit for receiving object light and converting the object light into luminance signals of a plurality of areas (col. 5 lines 10-15), and (B) a control unit for calculating a
10 histogram of a luminance distribution on the basis of the luminance signals of the plurality of areas converted by said photometric unit (col. 5 lines 33-37.) The Steinberg reference also discloses the apparatus deciding if an area exceeds a predetermined luminance level in the histogram (col. 10 lines 6-14), as well as discloses a resulting light emission (fig. 3 indicators 84, 92 and 98.) However, the Steinberg reference is not
15 found to disclose an apparatus in which the control unit controls a light emission of an illumination device, in which an area exceeding the predetermined luminance level is excluded in the control of the light emission.

Nevertheless, In addition to teaching a center-weighted approach to luminance analysis (col. 8 line 45 – col. 9 line 31) similar to that of Steinberg ('073 – col. 8 lines 33-
20 38), Boyack is found to teach luminance analysis in which a luminance signal is obtained by excluding luminance signals that exceed predetermined luminance levels from luminance signals (col. 9 lines 32-41.) It would have been obvious to combine the

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apparatus of Steinberg and the basis of control of its resulting light emission, with the exclusion of luminance signals based on a luminance threshold being exceeded as taught by Boyack, for the purpose of correcting very high contrast scenes which include over-threshold activities that add to the high luminance end of the histogram, and which

5 cause images to be too dark ('456 – col. 9 lines 32-36.)

Based on the foregoing response, in which claim 1 was employed to present representative amended claim language, the Examiner respectfully maintains the 35 U.S.C. § 103(a) rejections to claims 1, 12, 21, and 22.

Regarding claims 10, 19, and 27-30, each depend directly from either
10 independent claim 1, 12, 21, or 22, and thus inherit all the limitations of that particular independent claim. Consequently, based on their dependence and the foregoing response to arguments relating to claims 1, 12, 21, and 22, the Examiner respectfully upholds the 35 U.S.C. § 103(a) rejections to claims 10, 19, and 27-30.

15 ***Claim Objections***

Claims 21 and 22 are objected to because of the following informalities:

Claim 21 recites the limitation "said luminance level deciding unit " Response, p. 4 lines 17-18.) There is insufficient antecedent basis for this limitation in the claim.

Claim 22 recites the limitation "said luminance level deciding unit " (Response, p. 20 5 line 10.) There is insufficient antecedent basis for this limitation in the claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 112, first paragraph

The following is a quotation of the first paragraph of 35 U.S.C. 112:

5 The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 12, 21, and 22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject
10 matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Independent claims 1, 12, 21, and 22 include amended limitations relating to and including a "luminance level deciding unit". The Specification was not found to include support for these limitations.

15

Claim Rejections - 35 USC § 112, second paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

20 The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 12, 21, and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

 The claims are generally narrative and indefinite, failing to conform with current
25 U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

5 (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10 **Claims 1, 10, 12, 19, 21, and 22** are rejected under 35 U.S.C. 103(a) as being unpatentable over Steinberg (US 6,151,073) in view of Boyack et al. (US 5,724,456.)

Regarding claim 1, Steinberg discloses an apparatus comprising (A) a photometric unit for receiving object light and converting the object light into luminance signals of a plurality of areas (col. 5 lines 10-15), and (B) a control unit for calculating a
15 histogram of a luminance distribution on the basis of the luminance signals of the plurality of areas converted by said photometric unit (col. 5 lines 33-37.) The Steinberg reference also discloses the apparatus deciding if an area exceeds a predetermined luminance level in the histogram (col. 10 lines 6-14), as well as discloses a resulting light emission (fig. 3 indicators 84, 92 and 98.) However, the Steinberg reference is not
20 found to disclose an apparatus in which the control unit controls a light emission of an illumination device, in which an area exceeding the predetermined luminance level is excluded in the control of the light emission.

Nevertheless, In addition to teaching a center-weighted approach to luminance analysis (col. 8 line 45 – col. 9 line 31) similar to that of Steinberg ('073 – col. 8 lines 33-
25 38), Boyack is found to teach luminance analysis in which a luminance signal is obtained by excluding luminance signals that exceed predetermined luminance levels

from luminance signals (col. 9 lines 32-41.) It would have been obvious to combine the apparatus of Steinberg and the basis of control of its resulting light emission, with the exclusion of luminance signals based on a luminance threshold being exceeded as taught by Boyack, for the purpose of correcting very high contrast scenes which include over-threshold activities that add to the high luminance end of the histogram, and which cause images to be too dark ('456 – col. 9 lines 32-36.)

Regarding claim 10, Steinberg and Boyack are found to disclose all of the limitations of claim 10 (see the 103(a) rejection to claim 1 supra), including wherein said apparatus includes an image sensing apparatus ('073 – col. 6 lines 59-61.)

Regarding claims 12, 21, and 22, although the wording is different, the material is considered substantively equivalent to claim 1, as discussed above.

Regarding claims 19, although the wording is different, the material is considered substantively equivalent to claim 10, as discussed above.

Claims 27-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steinberg et al. (US 6,151,073) in view of Boyack et al. (US 5,724,456), in further view of Heard (US 4,671,655.)

Regarding claim 27, Steinberg and Boyack teach all the limitations of claim 27 (see the 103(a) rejection to claim 1 supra) except teaching wherein the histogram is generated on the basis of signal levels of red signal, blue signal and green signal that are obtained by decomposing a sensed image signal.

One of ordinary skill in the art of illumination control, when faced with the problem of achieving proper exposure by means of histogram information, would look to the solutions of others faced with similar problems. One such solution is presented by Heard. Heard teaches generation of a histogram on the basis of signal levels of red
5 signal, blue signal and green signal that are obtained by decomposing a sensed image signal (col. 2 lines 58-64.) It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the color based histogram as taught by Heard, with the apparatus as taught by Steinberg and Boyack, in order to effect appropriate illumination by increasing information employed in the decision process, i.e., using the
10 three luminance signals relating to the colors to be imaged, instead of merely using a single luminance input measurement.

Regarding claims 28, 29 and 30, although the wording is different, the material is considered substantively equivalent to that of claim 27, with deference given to the particular dependence derived from claims 12, 21 and 22, respectively, as discussed
15 above.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

20 A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later
5 than SIX MONTHS from the mailing date of this final action.


Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary C. Vieaux whose telephone number is 571-272-
10 7318. The examiner can normally be reached on Monday - Friday, 8:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, NgocYen T. Vu can be reached on 571-272-7320. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the
15 Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic
20 Business Center (EBC) at 866-217-9197 (toll-free).

Gary C. Vieaux
Examiner
Art Unit 2612


NGOC-YEN VU
PRIMARY EXAMINER